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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/786,685	05/18/2001	Toshiro Suzuki	56639849X00	3597

7590 09/21/2004

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EXAMINER

DAVIS, CYNTHIA L

ART UNIT	PAPER NUMBER
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2665

DATE MAILED: 09/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/786,685

Applicant(s)

SUZUKI ET AL.

Examiner

Cynthia L Davis

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) ____ is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 14-20 is/are allowed.
- 6) ☒ Claim(s) 1-10 and 12 is/are rejected.
- 7) ☒ Claim(s) 11 and 13 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12/21/1999 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Specification

Applicant is reminded of the proper language and format for an abstract of the disclosure.

1. The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. The abstract of the instant specification is more than one paragraph. Appropriate correction is required.

Claim Objections

2. Claim 10 is objected to because of the following informalities: "and has not orthogonality" in line 10 should be changed to "and is not orthogonal". Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. They all claim methods without any steps.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-10 and 12 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Nakamura.

Regarding claim 1, a method of mobile communication in which a base station communicates with a mobile station through a call control channel for transmitting call control information and through a perch channel for transmitting a spread code used for despreading demodulation of said call control information is disclosed in Nakamura, column 3, lines 8-12 (the system has a plurality of channels, some of which are control channels; all of them are spread). Said perch channel and said call control channel being arranged in a time base such that an error rate becomes less than or equal to a threshold level when said mobile station receives said call control channel is disclosed in figure 85 (they are arranged to minimize the error rate).

Regarding claim 2, said call control channel and a part that is provided in said perch channel and is not orthogonal to said call control channel in terms of a code are arranged such that the error rate becomes less than or equal to the threshold level when said call control channel is received is disclosed in figure 85 (they are arranged to minimize the error rate).

Regarding claim 3, the call control channel being interleaved is disclosed in column 21, lines 61-64.

Regarding claim 4, a method of mobile communication in which a base station communicates with a mobile station through a call control channel for transmitting call control information and through a perch channel for transmitting a spread code used for despreading demodulation of said call control information is disclosed in Nakamura,

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column 3, lines 8-12 (the system has a plurality of channels, some of which are control channels; all of them are spread). The perch channel and the call control channel being arranged in a time base such that said mobile station can demodulate said call control channel is disclosed in figure 85 and column 13, lines 10-11 (if it is used by mobile stations, they must be able to demodulate it).

Regarding claim 5, a method of mobile communication in which a base station communicates with a mobile station through a call control channel for transmitting call control information and through a perch channel for transmitting a spread code used for despreading demodulation of said call control information is disclosed in Nakamura, column 3, lines 8-12 (the system has a plurality of channels, some of which are control channels; all of them are spread). The call control channel being power controlled such that said mobile station can demodulate the call control channel is disclosed in column 35, lines 45-46, and column 13, lines 10-11 (if the mobile stations can use the call control channel, they must be able to demodulate it).

Regarding claim 6, a first channel generating part for spreading call control information with a first spreading code to generate a call control channel is disclosed in column 3, lines 8-12 (all the communication channels, including the control channels, are spread) and column 13, lines 10-11 (the control channel exists, therefore there must be a first channel generating part). A second channel generating part for generating a perch channel that transmits the first spreading code used for despreading modulation of said call control information is disclosed in column 12, lines 61-column 13, line 5. A channel multiplexing part for multiplexing the call control channel generated by said first

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channel generating part and the perch channel generated by said second channel generating part by arranging the call control channel and the perch channel such that said call control channel can be demodulated is disclosed in figure 85 and column 13, lines 10-11 (if the mobile stations can use the call control channel, they must be able to demodulate it).

Regarding claim 7, the channel multiplexing part arranging in a time base, the call control channel and the perch channels' part non-orthogonal in terms of a code such that said call control channel can be demodulated when received is disclosed in figure 85 and column 13, lines 10-11 (if the mobile stations can use the call control channel, they must be able to demodulate it).

Regarding claim 8, the channel multiplexing part multiplexing said perch channel and the call control channel subjected to interleave is disclosed in column 2, lines 61-64.

Regarding claim 9, a control part for performing power control such that said call control channel can be demodulated is disclosed in column 35, lines 45-46, and column 13, lines 10-11 (if the mobile stations can use the call control channel, they must be able to demodulate it).

Regarding claim 10, a method of mobile communication using a CDMA multiplex technique, in which a base station communicated with a mobile station through a traffic channel for transmitting user data and through a perch channel for transmitting a spreading code used for demodulating the user data is disclosed in column 3, lines 8-12. The traffic channel having a call control channel subjected to time division multiplex

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is disclosed in column 19, lines 20-22. The call control channel and a part that is provided in said perch channel and is not orthogonal to other channels are arranged not to overlap with each other in a time base is disclosed in figure 85.

Regarding claim 12, a method of mobile communication using a CDMA multiplex technique in which a base station communicates with a mobile station through a traffic channel for transmitting user data and through a perch channel for transmitting a spreading code used for demodulating the user data is disclosed in column 3, lines 8-12. Said traffic channel being constructed such that said traffic channel has a call control channel subjected to time division multiplex is disclosed in column 19, lines 21-22. The signal of said call control channel and user data are subjected to time division multiplex and interleaving is disclosed in column 19, lines 20-22, and column 21, lines 61-64.

Allowable Subject Matter

5. Claims 11 and 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. Claims 14-20 are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cynthia L Davis whose telephone number is (571) 272-3117. The examiner can normally be reached on 8:30 to 6, Monday to Thursday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (703) 272-3155. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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